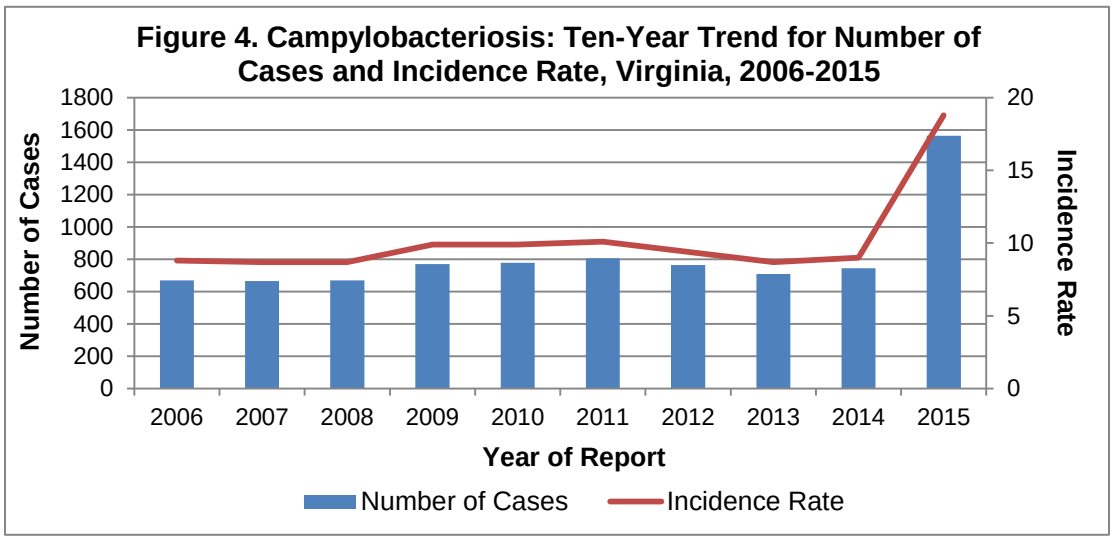
Campylobacteriosis

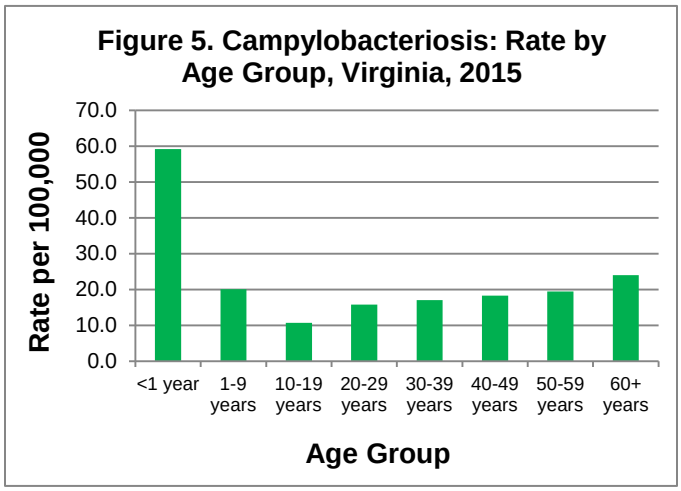
Agent: *Campylobacter* species (bacteria)
Mode of Transmission: Ingestion of undercooked meat, particularly poultry; ingestion of contaminated food, water, or raw milk; and direct contact with fecal material from infected animals or people.
Signs/Symptoms: Include diarrhea (frequently with bloody stools), abdominal pain, malaise, fever, nausea, or vomiting. In neonates and young infants, bloody diarrhea without fever may be the only manifestation of illness. Many infections are asymptomatic. Rarely, complications can develop, including reactive arthritis, febrile convulsions, or Guillain-Barré Syndrome; bacteremia can occur in children.
Prevention: Hands should be washed carefully after using the bathroom, after changing diapers or cleaning a child who has used the bathroom, after handling animals or their feces, and before preparing and eating food. Pasteurization of milk and chlorination of water supplies are also important. All foods containing eggs and meats, particularly poultry, should be cooked thoroughly.
Other important information: In 2015, a change was implemented to the campylobacteriosis case definition, allowing cases identified by the detection of *Campylobacter* species in a clinical specimen using a culture independent diagnostic test (CIDT) method to count as probable cases; prior to 2015, these cases were classified as suspect cases and were not included in campylobacteriosis case counts. Data regarding the performance of CIDTs indicate variability in the sensitivity, specificity, and positive predictive value of these assays depending on the manufacturer (CDC unpublished data). The use of CIDT methods by laboratories is increasing and may contribute to an increase in probable campylobacteriosis cases and a decline in confirmed campylobacteriosis cases.

Campylobacteriosis: 2015 Data Summary	
Number of Cases:	1,564
5-Year Average Number of Cases:	760.0
% Change from 5-Year Average:	+106%
Incidence Rate per 100,000:	18.8

In 2015, 1,564 cases of campylobacteriosis were reported in Virginia, including 712 confirmed cases and 852 probable cases. This represents a 110% increase from the 744 (729 confirmed and 15 probable) cases reported in 2014, and a 106% increase from the five-year average of 760 cases per year (Figure 4). The dramatic increase in cases from 2014 to 2015 is explained by a change in national case definition, described above.

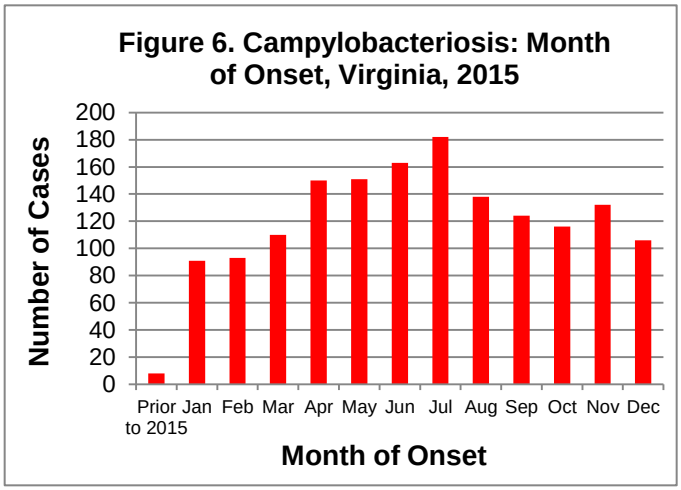


In Virginia, the highest incidence rates of *Campylobacter* infection are typically seen in children less than one year of age. In 2015, incidence was again highest among this age group, at 59.2 cases per 100,000 persons, while rates among other age groups ranged from 10.7 (10-19 years) to 24.0 (60 years and older) per 100,000 (Figure 5).



Race information was not reported for 32% of cases. For cases with a known race, incidence was highest among the white population (14.6 per 100,000), followed by the "other" race population (9.5 per 100,000), and the black population (7.8 per 100,000). Historically in Virginia, incidence is higher in males; this remained unchanged in 2015, with a rate of 20.9 per 100,000 among males and 16.9 per 100,000 among females.

Regionally, the highest incidence rate occurred in the northwest region (33.3 per 100,000), while the lowest rate was seen in the eastern region (10.5 per 100,000). Rates in the remaining regions ranged from 23.0 to 13.0 per 100,000. The occurrence of campylobacteriosis varied widely by locality, with the highest rates tending to be reported from adjacent localities (see map below).



While cases were reported in every month of the year, more cases were seen during the warmer months, peaking in July with 182 cases (Figure 6). Four outbreaks of *Campylobacter* infection were reported during 2015. These outbreaks occurred in the northern (3 outbreaks) and northwest (1 outbreak) regions and involved two restaurants, one water spray park and one business. One death attributed to campylobacteriosis was reported in 2015. This death occurred in an adult male from the 60 year and older age group.

Campylobacteriosis Incidence Rate by Locality
Virginia, 2015